The Strategic Plan 2014 – 2016

Goal #1 – Engage to Enable IT to Become a Partner of Choice

Obj. 1 - Collect business goals, integrate strategy

Obj. 2 - Establish a repetitive process that keeps the business and IT aligned

Obj. 3 - Provide enterprise applications that empower the business

Obj. 4 - Research new and emerging capabilities for insertion into the business

Obj. 5 - Manage data as an asset for information-based decision-making

Obj. 6 - Develop mobile-ready, highly functional web-based, accessible environments

The alignment of business and IT is a top priority for the City of Houston. Alignment is defined as the appropriate and timely application of IT in harmony with business objectives, strategies, and requirements[1]. The City of Houston has very clear lines of business (departments) with very clear business deliverables. In addition to providing individual unique technology support for the different businesses, there is a need to provide citywide synergies for underlying similar or interrelated technologies for increased value for the whole.

We will relentlessly strive to leverage technology solutions to meet business objectives. A successful technology integration strategy incorporates IT systems that enable new services, reduce or avoid costs and risks, and increase business productivity. As technology evolves, new capabilities to automate, streamline, and accelerate business processes may be inserted into the organization via improved communication mechanisms, mobile devices, and enhanced accessibility of critical information.

Data is a key asset for the City of Houston and its citizens. We will strive to create a data-driven city by turning data into valuable information. By doing this we will provide our leadership and the citizens they serve with the tools to make relevant decisions. Enterprise Data management will enable the use of key technologies such as business intelligence, location analytics, data warehouses and big data.

Enterprise Applications, such as GIS,[2] will continue to develop and support location services and business applications (such as the Houston Plat Tracker) across all City departments and will bring apps and maps for smarter and simpler analysis to all users across the City, both internal and public, via the MyCity portal – at Mycity.houstontx.gov.

Mobile devices continue to grow in popularity, both in the public and with City employees. As more and more business processes leverage mobile devices, City information sources such as intranet portals and the public www.houstontx.gov site must be optimized to provide an excellent user experience across many screen sizes and interfaces. Through implementation of Content Management Solutions, we will provide a framework that automates the upgrading of tens of thousands of web pages to a new design that is responsive to any device while also minimizing ongoing support costs.

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[1] Sarhandi et al., 2011
[2] Geographical Information Systems

Goal #2 – Create a Resilient, Scalable, and Agile IT Infrastructure

Obj. 1 - Ensure a base level infrastructure is in place to accommodate growth

Obj. 2 - Provide enterprise infrastructure as a utility

Obj. 3 - Seek opportunities to adopt and implement cost-effective shared service approaches

Obj. 4 - Leverage transformational technologies, e.g., cloud computing, for improved operational efficiencies

The need for the City's network to be able to dynamically grow and evolve on demand is paramount. Yet, lowering costs while providing reliable connectivity to over 450 City locations via a wide area network is also a primary goal for us. The business requirements of today and tomorrow demand a high-performance network infrastructure that can support increased use of video, faster access to data and applications, and low power use. Mobile solution providers are broadening their offerings to address the needs of in-line business users[3].

Open standards are also a requirement for ease of multi-agency connectivity, third-party integration and security compliance with industry standards. We have begun a project this fiscal year to upgrade and standardize the Voice and Telco platforms into a single system throughout most of the City. This project will include all associated call center applications.

We will promote the use of Green IT[4] to reduce energy and the real estate footprint by consolidating data center space across the City. Seven facilities have been identified for consolidation activities this fiscal year. In addition, new data center physical facilities will be shared with the Houston Police Department, thus demonstrating our commitment to share services and resources. Furthermore, as part of the consolidation exercise, we seek to expand the use of virtualization platforms to shift our investments to more efficient computing platforms, improve system delivery, and streamline costs.

Cloud computing has been embraced by the City of Houston and is already helping us reduce the total cost of ownership. However, opportunities still abound and the game has already changed in this very fast moving technology. Beyond the cloud are opportunities to move to a hybrid model that completely changes the way we run IT. We prefer using application hosting when there is a desire to satisfy a business need more quickly than standing up infrastructure.

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[3] The Expanding Role of Mobility In The Workplace – Forrester Research February 2012
[4] Green IT, also referred to as Green Computing, is the study and practice of environmentally sustainable technology – source: Wikipedia

Goal #3 – Transform our Future IT Workforce

Obj. 1 – Attract and retain new people

Obj. 2 – Review and align citywide IT classifications

Obj. 3 – Target employee productivity through innovative technology

Obj. 4 – Revitalize the structure of IT to reflect our demands

Obj. 5 – Invest in training and career development of IT professionals to keep skills current

Information technology workers remain one of the top 10 most difficult positions to fill in America[5]. Houston is the fourth largest city (with its sights on being number three), and one of the fastest growing municipalities in the country - this adds a colorful dimension to this staffing challenge. Most of the growth in Houston is aligned with the energy and health industries. This presents a challenge with staffing to other less financially fluent industries like government. It requires new thinking and approaches to not only attract new resources but to also retain the staff we have. In addition, we are challenged with training and maintenance of skills to continue to be able to support the growth and complexities of the environments we reside in today.

We will conduct research into best practices and methods to target the acquisition and retention of skilled workers, including an increase in collaboration with higher education. We have committed investments for training and curriculum development to ensure that our teams have the right skills to continue to meet our demands.

Citywide titles and designations have been unchanged for 15 years and now far outdate the technologies that are in use today. For example, the role and skill sets of desktop support analysts today are quite different from their counterparts of 15, or even five years ago. They may be called upon less to support devices and local applications, but more to support cloud or mobile solutions, engage in vendor relationships, and support business process.

Finally, there are several roles that did not exist over a decade ago but are well established careers today. The City is embarking on a job title reclassification project that is expected to yield tremendous benefits in aligning the right people with the right skills.

Research[6] shows that employees operate optimally when given a clear understanding of their roles and responsibilities. Aside from reducing the amount of confusion, it helps the technology groups develop a more accurate taxonomy of IT jobs that will attract tech job seekers, both internally and externally. This will also assist the Human Resources Department with more accurate competitive industry benchmarking for salary and benefits.

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[5] Forbes – 10 hardest jobs to fill in America: http://www.forbes.com/pictures/efkk45ejhem/10-hardest-jobs-to-fill-in-america/
[6] http://www.shrm.org/Research/SurveyFindings/Articles/Documents/SHRM-Employee-Job-Satisfaction-Engagement.pdf

Goal #4 – Improve the Overall Management of IT Services

Obj. 1 – Improve IT inventory, asset, and vendor management controls

*Obj. 2 – Improve and simplify the cost allocation process*

Obj. 3 – Optimize City of Houston portfolio of IT resources through effective governance

Obj. 4 – Create and establish service portfolios, catalogs, and service level agreements

Obj. 5 – Establish a citywide metrics and measures dashboard using knowledge performance indicators to drive excellence

Obj. 6 – Enable excellent customer service as part of our culture

Leveraging technology to provide a better experience for clients is a strategic focus for us over the next three years. In the preparation for this Plan, we have spent the last few months asking ourselves and our customers, *"What's wrong?", "What's working?",* and *"What's not working?."*
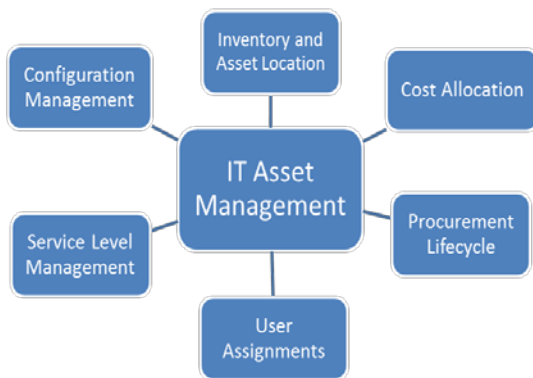
Along with the mayor's goal for fiscal responsibility, we aim to do a better job with IT asset management. We are taking steps to create and maintain an accurate, up to date assessment of all City-owned hardware and software assets including user assignments, asset location, and procurement lifecycle, cost, value and contractual status. This holistic view of inventory will drive an improvement in the quality of technology services, simplify our cost allocation model, and allow better decision-making in the overall management of IT.

There are two types of strategic alignment initiatives tied to the Governance Plan. The first set derives from the IT strategic plan for 2014 - 2016. All of the objectives are driven by delivering the best possible technology services back to the departments and are a joint effort between IT, Finance, and the executive leadership across all City departments.

The second type of alignment reflects a strategic initiative for citywide integration as identified by Executive Order 1-44, Information Technology Governance, the new citywide policy established in December 2012, by Mayor Annise Parker. All new IT projects are now taken through new citywide IT Governance processes, which will continue to be enhanced over the next few months.

Service catalogs and SLAs will be defined to better standardize the offerings and the quality of the services we provide. We aim to provide visibility and manage consumption. A process of measuring and reviewing key performance indicators will be developed to track and improve the effectiveness of all these processes and controls.

Goal #5 – Protect City Information and Data

Obj. 1 – Implement an IT security framework

Obj. 2 – Ensure secure information systems that host customers' applications and data

Obj. 3 – Provide security systems and services

The City must adhere to federal and state privacy and data security regulations, such as the Health Insurance Portability and Accountability Act (HIPAA) and Payment Card Industry (PCI). Executive Order 1-48, policy on IT Security, mandates that the City develop and maintain a citywide information security program. This will be accomplished by establishing and implementing information security policies, procedures and handbooks to facilitate appropriate protection and accountability of information. The Chief Information Officer has designated a Chief Information Security Official (CISO) to carry out the responsibility to establish a citywide information security capability for information and information systems.

The Chief Information Security Officer (CISO) has developed an *Enterprise IT Security Framework* that, when implemented, will provide the needed protection of the City's business and privacy information. The implementation roadmap has been developed and key security initiatives are underway in Fiscal Year 2014. This roadmap includes an automated vulnerability management framework that will be implemented citywide and will significantly reduce the inherent security risk (from the use of IT resources) to City businesses.

The vulnerability management framework provides systems and services that will enable the automated implementation of critical security controls that are essential to securing information systems that host customer applications and data.

Key security initiatives that have commenced in Fiscal Year 2014 and will continue iteratively through Fiscal Year 2015 and 2016 include:

1. Malware Defenses
2. Continuous Vulnerability Assessment and Remediation
3. Security Risk Intelligence
4. Data Loss Prevention
5. Mobile Device Management (MDM)
6. Cyber Security Awareness Training
7. Cyber Security and Disaster Recovery Planning

Goal #6 – Enhance Citizen Engagement

Obj. 1 – Enhance citizen engagement

Obj. 2 – Enhance City public safety communications systems and services

The City of Houston is committed to more actively engaging citizens in the delivery of services, and providing adequate visibility into taxpayers' IT investments.

To strengthen its citizen-centered approach to government, IT has begun to develop a strategy for citizen engagement. One component of this strategy is intended to increase public transparency about IT projects, particularly those that have high impact on citizens.

We will share this information through the Internet and/or social media, to help bring citizens closer to their government. We will also solicit citizen input regarding new technology that can provide for a better government, such as civic programming events and an open data portal.

Houston plans to follow the lead of several major US cities by coordinating an Open Data Initiative. Open Data will empower citizens, non-profits, private business, students and entrepreneurs to find innovative ways to use our data to benefit the society, fuel efficiencies and increase economic growth in Houston.

Open Data is more than just government transparency; it puts citizens in an active role of improving local government.

Upcoming improvements to public-facing portals include:

- A new release of the current information website that works on any device, which, given the address, can look up multiple current City components of that address, such as school district, council, key map, super neighborhood, trash pickup, etc.

- Partnering with all City departments to deliver accurate and real-time City data for citizens' apps.